Introduction

In October 2002, the Bureau of Justice Assistance awarded a grant to the **National Center for State Courts** to provide technical assistance services to state-level agencies (i.e., administrative offices of the courts, alcohol and drug abuse agencies) to:

1. Enhance the leadership of statewide drug court efforts.
2. Improve coordination and collaboration between the drug court agencies.
3. Increase the likelihood of the institutionalization of drug courts into the mainstream of court operations.

The **National Center for State Courts** is providing technical assistance services to state administrative offices of courts (AOCs) and state alcohol and drug abuse agencies (AODs) that include:

1. On-site technical assistance.
2. Off-site technical assistance (e.g., facilitates peer-to-peer consultation via e-mail and conference calls).
3. A series of topical publications on integrating drug courts into mainstream court operations.

This Bulletin is the third in the series of publications.

Information Collection, Storage, and Use for Drug Courts: Developing a Statewide System

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With generous support from the Bureau of Justice Assistance (BJA), U.S. Department of Justice, the National Center for State Courts (NCSC) has conducted the Drug Court Statewide Technical Assistance Initiative to provide technical assistance services to state-level agencies for the development, refinement, and institutionalization of their state's drug court programs. As part of this initiative, NCSC has provided technical assistance services to several states (Michigan, Vermont, and Wyoming) to assist with the development of statewide drug court case management systems.

The purpose of this Bulletin is to discuss and make recommendations regarding the development of statewide drug court case management systems. There are three principles that underlie this discussion.

First, it has become increasingly clear that drug court case management systems must do much more than simply collect data. It is important that the systems be designed to provide the information that drug court personnel need to manage their programs and perform their jobs effectively. Duplicating effort and requiring that data be kept for the sake of keeping data will only discourage accurate and timely data entry, encourage poor data controls, and weaken any evaluation findings. Simply put, the drug court case management system must first serve the daily needs of the drug court professional. To that end, this report will only refer to drug court

information management systems as Case Management Systems (CMS).

Second, only data that is useful should be collected. Evaluators and state and local program managers should work together to determine the questions that will be answered using the collected data. Once those questions have been decided upon, it should become clear what variables need to be collected and in what format.

Third, new Web-based technology allows for improved form and function in drug court case management. If used correctly, Web-based designs can promote uniform reporting among courts. While confidentiality must be carefully considered, it is clear that current technology can safeguard sensitive information and exceed the requirements of state and local privacy laws.

This Bulletin will work through the various steps required to develop a useful CMS that serves the needs of program managers, state and federal funding agencies, and evaluators. It is based on the experience of the author and the National Center for State Courts' BJA-supported Statewide Drug Court Technical Assistance Project. The Bulletin first discusses reasons for developing a standardized statewide case management system. Second, it provides recommendations concerning the actual development of a CMS. Finally, the Bulletin suggests uses for information collected, including process evaluations and performance and outcome measurement.

Why Build a Statewide Case Management System?

Much like the movement itself, drug court information management often takes a grass roots approach. This approach is marked by local courts determining their own data collection and management needs based upon operations and evaluation needs. Often, the data collection and management portion of the drug court operations are not addressed until a program manager or evaluator needs access to information. The time-draining

task of digging through paper reports has motivated some program managers to develop or acquire some sort of personal computer (PC) based application. And, while that application generally has not met all of the needs of the program, often it has been considered enough to get by.

However, recent complaints about the lack of breadth in drug court evaluations and the continuing inability of the field to document its own progress has

motivated change in the realm of drug court case management. And, as the drug court movement continues to flourish (Huddleston, Freeman-Wilson and Marlowe, forthcoming), the need for standardized and consistent data management continues to grow. The majority of the funding for drug court programs has been shifting. Programs are becoming locally funded and institutionalized and the demand for standardized data to report drug court activities and program outcomes is rising. States such as Louisiana, Michigan, Washington, and Wyoming have started or completed the process of installing statewide Web-based drug court information management systems. And, it can be assumed that many others are likely to follow.

Standardized statewide case management systems can assist localities and states in the measurement of drug court performance. Performance measurement is central to the task of defending and managing drug courts (Cheesman Rubio, Van Duizend, 2004). As increasing funds are being allocated to drug court programs, stakeholders are demanding proof of results. Historically, it has been impossible to report the full scope of drug court activity, let alone the impact of such work. If developed properly, a statewide CMS can provide state administrators and managers the ability to immediately report the numbers of clients being served along with some idea about the services those clients are receiving. Additionally, a well-planned CMS will allow evaluators to determine answers to the pressing questions surrounding drug courts like those related to retention, sobriety, and recidivism (Heck, forthcoming).

A standardized CMS will also promote comparability between courts and clients. It simply makes good managerial sense to determine the extent to which programs, and/or modalities within programs, are successful with varying types of clients. As resources get stretched, it is important to be able to draw conclusions about the efficacy and efficiency of particular programs. With planning, a CMS should allow evaluators and managers to isolate variables that predict program success. For example, if a particular program works well with methamphetamine users but not with alcoholics, it should be discernible through the proper use of a standardized case management system.

One of the complaints about much of the drug court research is the lack of comparative research. A well-designed database can provide a valuable mechanism for developing comparison groups. While not a perfect solution, a comparison group made up of similarly situated drug offenders can shed some light on the effectiveness of a drug court program in relation to other programs or policies.

How Does One Build a Competent Case Management System?

Planning

Much like the construction of a well-built home, the design and development of a CMS requires planning, craftsmanship, and quality materials. During the planning stage, it is most useful to develop a "user group" from the field that is willing to see the project through to its completion. The user group should be a collection of interested and invested drug court professionals from within the state. It is strongly recommended that the user group include representatives from each of the core drug court components that could possibly use the system.

Often software development begins with the development of a functional requirements document (FRD). The FRD is supposed to represent all of the facets of the system that will be developed. Often the FRD is used as part of an expanded request for proposals. It is possible, however, to develop the software without the completed plan in place. Regardless of the decision made concerning development protocols, there are some baseline issues for developing software that must be considered prior to construction.

Three of these issues are access, security, and functionality. Access speaks to the number of users that the system will handle at a given time. If the system is to be running 24 hours a day and have many users operating in the system at the same time, the server must have the capacity to handle multiple users simultaneously. If users outside the drug court are to have direct access to the system, communications capacity must be considered. Security often drives the form of the relationship between the user and the server and is particularly critical when non-drug court personnel are to have direct access to the data. Various options are available depending on the configuration of the system. Functionality is related to the level to which the system interacts with the user. If there is regular feedback and relationships between fields are stressed, then it is important to have enough operating memory in the system to handle the demand. Given the interrelationships among these factors, it is wise to check with software consultants in designing and developing protocols for a Web-based application.

A fourth key is the conceptual framework of the data base underlying the CMS. Drug court programs are multifaceted programs with several unique dimensions. Each of these dimensions revolves around the center piece that is the court itself. Given the broad range of drug court activities, it is valuable to consider the functions of the court in order. Drug court clients follow a trajectory as they move through the program. This trajectory includes screening, assessment, admission, treatment, sanctions and incentives, and other services. One way to ensure the completeness of a drug court CMS is to follow the path of a client. This path should be mapped, and the map should focus all of the decision points in the drug court program.

The path of a drug court client crosses many decision points. All of these points make excellent frames of reference for a drug court database as they both require and produce information. For example, the initial screening of a drug court client requires criminal background information as well as information regarding the current charge and the appropriateness of drug or alcohol treatment. This information should be entered and referenced in the software system. When decisions, such as the admission of a client, are recorded, the software can easily date and time stamp the information to monitor the processing of clients.

One of the best ways to follow the 'decision point' model in developing a software solution for drug courts is to ask two rather simple questions about each decision. The first is 'what do we need to know to effectively make each decision?" The second question should follow the first: "What information does our decision provide that should be documented?" For example, if a client is given a sanction for a particular behavior, it is important that the CMS provide a place for recording both the outcome and the impetus. And, as is always the case, time is a relevant variable that should be recorded. The behavioral model associated with drug courts requires that continual logs be kept that reflect the actions of clients in relationship to the actions of the court. Judges, program managers, probation offices, and treatment providers, as well as evaluators, will be thankful for the ability to link sanctions or incentives to client behaviors and the dates on which all of these activities occur.

It is also critical that the planning stage of CMS development include a discussion about the system reporting capabilities desired. Simply documenting drug court operations in a complete manner will provide a great deal of useful information for program management and public relations. However, CMS planning and development only occur once. With that in mind, it is critical that evaluators be included in identifying reporting requirements. In addition to the usual status and manage-

ment reports, many program managers and statewide directors would find ad hoc reporting capability useful. The advent of more sophisticated and less expensive querying programs or software make this type of capability readily available.

Development

The development of any kind of software requires a certain amount of craftsmanship. The term craftsmanship is appropriate, as the design of software of this magnitude requires knowledge, experience, and creativity. While many software designers use their own signature approaches, there are a few points that should be remembered to create a seamless software design and development project. The first of these points is communication. Successful interactive software design should include a great deal of communication and review between the developers and the users. As discussed previously, the user group can be an effective means for ensuring that the needs of the practitioners in the field are met.

The second point deals with the long term use of the program. Many databases, particularly those developed for government or industry, were not developed with a focus on the possibilities. As drug courts continue to rapidly expand, so do their needs for storage capacity and access. The choices made in developing a database can often limit capacity in the future. Statewide managers and drug court program directors should carefully consider the potential of their state in terms of drug court development and usage. Few people would have predicted the dramatic growth in the drug court movement over the last 15 years. Now with many states considering the application of drug courts' problem-solving approach to other behavioral areas, it is very likely that management information needs will continue to grow.

The third point offered for consideration during the development phase of the program is that software development can include all aspects of drug court operations. For example, the Louisiana State CMS includes a risk assessment tool as part of the screening process. It is also possible to load existing assessment tools, like the Addictions Severity Index (ASI), into a drug court CMS. The Wyoming system that is currently under development will link with the state lab to provide for immediate and accurate reporting of drug testing results.

Implementation

Software development is much like building a dam. All the leaks cannot be identified until water is added. Software that is built upon relationships between fields often has errors as data is added. This is due to the inability of programmers to know all of the possible relationships required to run the program prior to testing. Thus, planning for rigorous testing of this system prior to full implementation is essential. This process is often referred to as "beta testing." Beta testing allows the system to go "live" in a few sites. These sites should be selected based upon how extensively testers will use the system as well as their willingness to participate in the testing process. While beta testing can be extremely challenging, since it may require the drug court workers to repeatedly enter data and will certainly involve many errors and problems, it is absolutely essential for transforming a raw untested system into one that will serve a drug court effectively.

At some point, a decision needs to be made to allow the larger population of drug court professionals to begin using the system. In determining when this should be done, a primary concern is assuring that information entered into the system will not be lost. System backup becomes increasingly important as more data is collected.

Training is also central to successful implementation of case management systems. All end users should be carefully trained, not only on the operation of the system, but on the security protocols as well. This training must be practical and allow users to work through the system and test the power of the system as well as their own capabilities. One option for managers is to consider a short test at the end of training that would ensure knowledge of both security protocols and system capabilities. After passing the test, users could gain a certification to use the system. Follow-up training is often helpful for addressing usage questions that have arisen in the initial implementation period and to ensure consistent data entry practices.

Finally, communication between the users and the software developer should be carefully managed during the implementation stage. Complex situations can be made more manageable by creating an information path between users and programmers. Often programmers speak a language that is very different to those who work in the drug court field. This language barrier can lead to problems for both sides. Further, if 400 drug court professionals all have access to the software developer directly, it will certainly lead to chaos and unhappiness.

What Is Important In a Statewide Case Management System?

The most important aspect of software development for drug courts is that the system provides functionality for the users. Drug court software can and should simultaneously make the users more efficient and effective, improve management and employee supervision capabilities, and provide data that is accurate, reliable, and useful for presentation to stakeholders and policy makers as well as evaluators.

Drug court case management functionality should promote constant use from professionals working in the field. If the CMS can serve as a one-stop client management tool, then several things are likely to happen. First, the quality of the data that is entered into the system will be high. Treatment providers, case managers, judges, and other professionals will work to ensure the accuracy of information in the system as it becomes part of their daily activities rather than a separate enterprise. Second, information can be shared more quickly than through the old paper-driven models. This should improve drug court team responses and client accountability. Third, data in the system should be up-to-date and immediately accessible. Federal and state funding agencies should be able to get quick answers to questions about drug court activity. Finally, program

management should improve as coordinators can track client progress and employee activity.

Standardization has been a challenge for drug courts that have a strong grass roots nature. In this context, standardization does not mean requiring all courts to look exactly alike, but rather requiring courts to create uniform definitions for events and activities. For example, many courts use varying definitions for particular events that occur in the program or differ on whether AA or NA counts as treatment or on the use of technical probation violations as events leading to recidivism. These questions do not necessarily need to be answered from a program perspective, but they do need to be answered to preserve data integrity.

Drug court case management systems should also promote performance measurement. Performance measurement allows for agencies to determine the extent to which they are meeting their goals and creating positive outputs or outcomes (Cheesman, Rubio, Van Duizend, 2004). Performance measures allow for prioritizing activities and allocating resources (Dilulio et al., 1993). The mission and goals of an individual drug court program should provide the primary performance measure-

ment categories. Beyond the local mission, it is important that drug courts report their activities on a state and national level. Performance indicators can assist in this process (Heck, forthcoming). There are three primary areas of performance measurement that should be considered for drug courts beyond the local goals — sobriety of clients, retention in program,

and recidivism. While it goes beyond the scope of this Bulletin to define these measures, it bears mentioning that without some plan to document these three major objectives of drug court programs, there is little that can be said about drug court outcomes and impact.

Confidentiality

The Health Insurance Portability and Accountability Act (HIPAA) and the Code of Federal Regulations (see 42 CFR) both require strict control over drug court client records as they relate to medical information. However, much of the information used in drug courts is part of the public record (i.e. arrests, court actions, etc.). This inconsistency often creates tension in the area of drug court record management. However, the tension in the area of confidentiality can actually be lessened by carefully planning a drug court CMS.

It is clear that medical information cannot be disclosed to anyone without appropriate authorization or purpose. Authorization can come from the client or by court order. Absent one of these two types of authorization, substance abuse treatment information that could be con-

sidered medical must be kept private. Case management systems must be designed with the appropriate "due diligence" related to security. It is possible to create a system that maintains all types of records but keeps private notes and records separate from those that are readily accessible.

Any time that information is shared, the risk that it will be compromised is increased. In the area of security, it is a good idea to seek the assistance of a legal professional who specializes in medical records and practice. Additionally, it is strongly suggested that program managers and state directors require drug court clients to sign a waiver as a standard part of the admission process. While these waivers will not provide absolute protection, they should, in conjunction with due diligence in software design and development, help to provide a secure environment for practice.

Conclusion

As the drug court movement continues to grow throughout the United States, it is becoming increasingly important that local programs and state management teams find ways to gather, analyze, and report meaningful statistics regarding the activities of drug courts. There has been general consensus that drug court productivity is poorly reported because of a lack of agreement on definitions and weak data management. These problems have been magnified as additional pressure has come to bear on drug courts and other programs to demonstrate results (see Cheesman, Rubio, and Van Duizend, 2004).

Case management systems for drug courts can serve to make practitioners more effective and efficient and improve management of

drug court programs. Most importantly, case management systems can serve to provide useful information about the performance and activities of drug court programs that can be shared with policy makers and stakeholders to provide a basis for sustained funding and support. As more systems are developed and implemented in states around the country, the cost of implementing a statewide system should decline. Despite the difficulties and challenges related to the development of drug court case management systems, the final product should advance the field, make individual courts statewide drug court programs more effective and efficient, and help to institutionalize the problem-solving approach throughout the nation.

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